AN ADDRESS
ON
THE IMPORTANCE OF POST-GRADUATE STUDY.

Delivered at the Opening of the Museums of the Medical Graduates College and Polyclinic, July 4th, 1900,

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IF the licence to practise meant the completion of his education how sad it would be for the doctor, how distressing to his patients! More clearly than any other, the physician should illustrate the truth of Plato's saying—that education is a life-long process. The training of the medical school gives a man his direction, points him the way, and furnishes a chart, fairly incomplete, for the voyage but nothing more. Post-graduation study has always been a characteristic feature of our profession. These three hundred years the schools of Italy, Holland, France, Austria, and Germany have in turn furnished instruction to the young English doctors who believed in the catholicity of medicine, and who felt the sharp sting of the remark which associates homely wits with home-keeping youths. At first it was the grand tour, and many of the masters spent years in foreign study. In spite of our journals and international societies, and increased facilities for travel, I am not sure that among the teachers in our art, the world over, medicine to-day is any more cosmopolitan than in the seventeenth and eighteenth centuries. Men now spend a few months or a year in foreign study, whereas our great-grandfathers thought nothing of two and three years. I have seen the MSS. journal of Dr. John Morgan (a Pennsylvania colonist), the founder of the first medical school in America (University of Pennsylvania), who, after graduation at Edinburgh, spent three years on the Continent and became thoroughly familiar with Italian, Dutch, and French medicine, reaching such distinction as a student that he took his seat as a corresponding member of the Paris Academy of Surgery, and was elected a Fellow of the Royal Society. Linacre, Caius, and Harvey remain to-day the models for all students in foreign lands, but the pace they set is a hard one to keep up. In the rapid extension of methods and subjects in medical education during the past quarter of a century post-graduate teaching has come in for a full share of attention. In the United States many special schools have been organised, and perhaps more systematic attention has been paid to the subject than anywhere, except in Germany. In New York, in Philadelphia, and in Chicago, the polyclinics and post-graduate colleges have been widely appreciated by the practitioners, and have done much good. Less successful attempts have been made by some of the ordinary medical schools, but the leading ones have now abandoned in great part the teaching of graduates. Personally I have been engaged in the work for the past eleven years. For the first five years of the organisation of the Johns Hopkins Hospital we admitted only physicians, but since the medical school proper began we have had courses for graduates in the months of May and June. At any time during the year, at the discretion of the professor, a few special students may enter the classes or work in the laboratories. So far as the subject of medicine is concerned it is easy to arrange very attractive courses in routine ward instruction, in physical diagnosis, and in clinical microscopy, I have just finished a six weeks' course of clinical instruction to a class of of about thirty general practitioners, and to meet these good earnest students from all parts of the country, some of whom have been in practice fifteen or twenty years, stimulates one's optimism as to the outlook in the profession.

Upon the advantages which London offers for graduate study it would be superfluous to dwell, since here is collected a larger number of sick people than in any city in the world. The special hospitals offer unequalled facilities for the study of diseases of the eye, of the skin, of the nervous system, and of the diseases peculiar to women and children. The absence of concentration of material so convenient in Vienna is counterbalanced by the much more elaborate equipment to be found in the special hospitals. There has been but one thing lacking—the organisation necessary to bring patients and students into intimate association, for which purpose this College for graduates was started. Until recently the physician who came to London felt lost and perplexed, and even if he took out three or four hospital tickets, there was but little systematic teaching, and he had to pick up information as best he could. Here he finds a local habitation, with a comfortable reading room, a good library, and a well-arranged curriculum embracing all the practical branches of medicine and surgery.

The value of a Museum as a means of practical instruction was first practically demonstrated by John Hunter, whose magnificent collection is in itself a college for graduates. So extensive is the material, so admirably arranged, and so well catalogued, that to the general practitioner and to the special student it offers a unique field for study. I am surprised that a larger number of physicians do not take advantage of the opportunity there offered to study accurately and systematically the manifold manifestations of disease. To Hunter's example is owing the place which the Museum occupies in the medical schools of this country. You have been fortunate in having associated with your college a man with a truly Hunterian mind. In the broad scope of his work, in the untiring zeal with which he has studied the natural phenomena of disease, in his love for specimens and collections, Mr. Jonathan Hutchinson bears a strong likeness to the immortal Hunter. No individual contributor in this country has made so many careful observations upon so many diseases. He is the only great generalised specialist the profession has produced, and his works are a storehouse upon which the surgeon, the physician, the neurologist, the dermatologist, and other specialists freely draw. When anything turns up which is anomalous or peculiar, anything upon which the textbooks are silent, and the systems and cyclopædias dumb, I tell my students to turn to the volumes of Mr. Hutchinson's *Archives of Surgery*, as, if it is not mentioned in them, we have surely something very much out of the common. It is very fortunate that the collection which he has made will be kept together, as it will be of great service to students from all parts of the world. In one respect it is a unique collection, pictorial and clinical, not anatomical and pathological, and it will remain a worthy monument to the zeal and perseverance of a remarkable man—a man who has secured the homage of a larger number of clinical workers than any Englishman of his generation.

Post-graduate instruction is needed in all classes among us. The school for the young doctor is a general practice, in which the number and variety of cases will enable him at once to put his methods into daily use. A serious defect may warp his course from the outset. Our students study too much under the one set of teachers. In English and American schools they do not move about enough. At a tender age four or five years give a man a sense of local attachment to place and teachers which is very natural, very nice, but not always the best thing for him. He goes out with a strong bias already in his mind, and is ready to cry "I am of Guy's," "I am of Bart's," "I am an Edinburgh man." To escape from these local trammels, which may badly handicap a man by giving him an arrogant sense of superiority, often most manifest when there is least warrant, is very difficult. I knew three brothers in Canada, Edinburgh men, good fellows at heart and good practitioners, but for them the science and art of medicine never extended beyond what their old teachers had taught. A Guy's man they could just endure, for the sake, as one of them said, of Bright, and Cooper, and Addison, but for men of other schools they entertained a supreme and really ludicrous contempt.

There are two great types of practitioners—the routinist and the rationalist—neither common in the pure form. Into the clutches of the demon routine the majority of us ultimately come. The mind, like the body, falls only too readily into the rut of oft-repeated experiences. One evening in the far North-West, beneath the shadows of the Rocky Mountains, we camped beside a small lake, from which, diverging in all directions, were deep furrows, each one as straight as an arrow, as far as the eye could reach. They were the ruts or tracks which countless generations of buffaloes had worn in the prairie as they followed each other to and from the water. In our minds

countless, oft-repeated experiences wear similar ruts, in which we find it is easiest to travel, and out of which many of us never dream of straying. Year by year we follow the same plan in practice, give the same drugs, and settle down into routinists of a most commonplace type. Last year I was called to a town in Pennsylvania, and having to wait until late in the evening for the return train, I insisted, as is my wont, that the doctor should carry on his daily work, and allow me if possible to help him. An afternoon round among patients, chiefly of the mechanic class, showed me a shrewd cheery man, who in twenty years had gained the confidence and esteem of his patients. Kindly, hopeful words, very sensible directions about diet, and some half dozen drugs, seemed the essentials in his practice. In the evening I saw him dispose of a dozen patients at an outdoor-dispensary rate; the examination was limited to the pulse, the tongue, and sometimes the throat. The dispensing, of the most primitive sort, was done at the table, on which stood four or five tin and paper boxes containing large quantities of calomel, soda, antipyrin, and Dover's powder. Other drugs, he said, were rarely necessary. He never used a stethoscope, he had no microscope, or instruments of precision other than the thermometer. In rep'y to my questions he said "that he rarely had to make an examination. If the patient has fever I send him to bed; if there is œdema I ask for the urine. Of course I make many mistakes and I sometimes get caught, but not oftener than the other fellows, and when I am in serious doubt I ask for a consultation." This was a man of parts, a graduate from a good school, but early in his career he had become very busy, and gaining the confidence of the people, and having much confidence in himself, he had unconsciously got into a rut, out of which at 40 only one thing could lift him—a prolonged course of additional study. This is by no means an exaggerated picture of a routinist in general practice. We all have our therapeutic ruts, and we all know consultants from whom patients find it very difficult to escape without their favourite prescription, no matter what the malady may be. Men of this stamp gain a certain measure of experience, and if of a practical turn may become experts in mechanical procedures, but to experience in the true sense of the word they never attain. In reality they suffer with the all-prevailing vice of intellectual idleness. It is so much easier to do a penny-in-the-slot sort of practice, in which each symptom is at once met by its appropriate drug, than to make a careful examination and to really study the case systematically. Much depends on a man's mental constitution, but much more on the sort of training he has had. If when a student good methods are not acquired it is very hard to get into proper habits of work in practice.

The rationalist, on the other hand, always approaches a patient as a mathematician does a problem. There is something to be found out; in each case, however trivial there is something novel; and the problems of causation and the question of relief, while not, perhaps, of equal importance, are of equal interest. He may be just as busy as his idle brother, but he finds time to keep up a technical dexterity in the use of instruments of precision, and the stethoscope and the microscope are daily helps in diagnosis. These men are the delight of the consultant. To go into the country and find the diagnosis made in a case of mitral stenosis, a Friedreich's ataxia, a case of leukæmia, or one of myxœdema, gives a man a thrill of pleasure, such as Comte says he always felt when a student gave him an intelligent set of answers in an examination. It is this class of practitioners for which the post-graduate courses are helpful and necessary. They alone feel the need of keeping abreast with the times, and men of this type will return every few years, finding that a three months' course of study not only improves and helps them personally, but is most beneficial in their practices.

The members of no class in our ranks travel to the waters in deeper or straighter ruts than the specialists. To work for years at diseases of the skin, ophthalmology, gynæcology, etc., necessarily tends to make a man narrow, not only as a practitioner but in other relations. One of the best features of British medicine has been the practice of specialities by general surgeons and physicians. It has been better for the men themselves, perhaps, than for the patients and for the particular branch practised. Nowadays, to master even the smallest speciality requires concentrated effort of years' duration, and to counteract the benumbing influence of isolation a man must scan the wide horizon of pathology, and must cultivate ardently the general interests of his profession. The degree of advancement of the specialities in different countries must be borne in mind by our friends, and there are few who have been in practice for five or ten years who would not be benefited by a course of study in some foreign country.

After all, no men among us need refreshment and renovation more frequently than those who occupy positions in our schools of learning. Upon none does intellectual staleness steal "with velvet step, unheeded, softly," but not the less relentlessly. Dogmatic, to a greater or less degree, all successful teaching must be; but year by year, unless watchful, this very dogmatism may react upon the teacher who finds it so much easier to say to-day what he said last year. After a decade he may find it less trouble to draw on home supplies than to go into the open market for wares, perhaps not a whit better but just a wee bit fresher. After twenty years the new, even when true, startles—too often repels; after thirty, well, he may be out of the race—still on the track, perhaps, even running hard, but quite unconscious that the colts have long passed the winning post. These unrefreshed, unregenate teachers are often powerful instruments of harm, and time and again have spread the blight of a blind conservatism in the profession. Safely enthroned in assured positions, men of strong and ardent convictions, with faithful friends and still more faithful students, they too often come within the scathing condemnation of the blind leaders of the blind; of those who would neither themselves enter into the possession of new knowledge, nor suffer those who would to enter. The profession has suffered so sorely from this blight of intellectual old fogeyism, that I may refer to the most glaring instances in our history. In the scientific annals of this great metropolis there is no occasion more memorable than April 16th, 1616, when Harvey began his revolutionary teaching. Why the long, the more than Horatian, delay in publishing his great discovery? He knew his day and generation, and even after twelve years of demonstration, which should have disarmed all opposition, we know how coldly the discovery was received, particularly in certain quarters. Harvey, indeed, is reported to have said that he did not think any man above 40 years of age had accepted the new truth. Many of us have lived through and taken part in two other great struggles. The din of battle over the germ theory of disease still rings in our ears. Koch's brilliant demonstration of the tubercle bacillus had a hard up-hill fight to recognition. The vested interests of many minds were naturally against it, and it was only the watchers among us, men like Austin Flint, who were awake when the dawn appeared. It is notorious that the great principles of antiseptic surgery have grown slowly to acceptance, and nowhere more slowly than in the country in which they were announced, the country which has the great honour to claim Lord Lister as a citizen. Old-fogeyism of the most malignant type stood in the way, and in some places, strange to say, still stands. Mentally it is possible that surgeons age earlier than physicians. I remember as a student listening to the introductory lecture of a distinguished surgeon at one of the metropolitan schools, the burden of whose discourse was the finality which had been reached by modern surgery. In boldness of conception and in precision of execution, he said, we could scarcely hope to see any further progress. Poor man! Cerebral, renal, and hepatic surgery, to say nothing of other operative advances, followed in rapid succession, and I only quote this as illustrating the state of mental blindness with which we teachers may be smitten.

As Locke says: "Truth scarce ever yet carried it by vote anywhere at its first appearance," and these well-known examples illustrate a law in human knowledge that a truth has to grow to acceptance with the generation in which it is announced. Progress is an outcome of a never-ending struggle of the third and fourth decades against the fifth, sixth, and seventh. Men above 40 are rarely pioneers, rarely the creators in science or in literature. The work of the world has been done by men who had not reached *la crise de quarante ans*. And in our profession wipe out with but few exceptions the contributions of men above this age, and we remain essentially as we are. Once across this line we teachers and consultants are in

constant need of post-graduate study as an antidote against premature senility. Daily contact with the bright young minds of our associates and assistants, the mental friction of medical societies and travel are important aids. Would you know the signs by which in man or an institution you may recognise old fogeyism? They are three: First, a state of blissful happiness and contentment with things as they are; secondly, a supreme conviction that the condition of other people and other institutions is one of pitiable inferiority; thirdly, a fear of change which not alone perplexes but appals.

Conservatism and old fogeyism are totally different things; the motto of the one is, Prove all things, and hold fast that which is good; of the other, Prove nothing, but hold fast that which is old. Do not suppose that you have here a monopoly of the article, which is a human, not a national, malady, for we see a very virulent type in America. In its illusiveness and in the disastrous consequences which have often followed its hunting, old-fogeyism is a sort of Snark in the medical profession. Before the Boojum, in the form of an entrenched variety, many good men and true have softly and silently vanished away, like the beamish nephew of the bellman, sacrificed to intellectual staleness in high places. One of the best correctives is the plan followed at Harvard, which compels (?) every teacher to take the Sabbatical year, ensuring in this way intellectual rest of the mind, if not refreshment. To maintain mental freshness and plasticity requires incessant vigilance; too often, like the dial's hand, it steals from its figure with no pace perceived except by one's friends, and they never refer to it. A deep and enduring interest in the manifold problems of medicine, and a human interest in the affairs of our brotherhood—if these do not suffice, nothing will.

As I stated at the outset, during the past three centuries English students have frequented in turn different countries, drinking deep, deep draughts at the great fountains of learning. Think of the debt we owe to these men and to their foreign masters! Linacre, and his successors, Caius, Harvey, and Glisson brought the new learning from Italy, and, moreover, gave to English medicine that smack of culture, that tincture so peculiarly its own. From Holland a succeeding generation drew rich stores of knowledge, and the methods of teaching of the great Boerhaave were quickly adopted by English and by Scotch students. From France came next the new science of Bichat, the new art of Laennec, and the new methods of Louis. To another group the great teachers of Austria contributed accuracy in clinical methods, a zest for the study of special branches, and a much-needed, at the time, therapeutic nihilism. The debt of the present generation to Germany can never be paid. Think of the scores who have found inspiration in our common master Virchow; and in the scientific study of disease the Fatherland is still in the van. The great republic of medicine knows, and has known no national boundaries, and post-graduate study in other lands gives that broad mental outlook and that freedom from the trammels of local prejudice which have ever characterised the true physician.

The course of Empire has opened new fields, in which problems new and old have been presented for solution, some of which are of great interest to you on this side of the water. In any comprehensive survey of the educational field in medicine, perhaps the most important single event during the past quarter of a century has been the silent revolution which has taken place in the United States, a revolution which has a direct bearing upon the matter in hand. Everywhere in the schools the entrance requirements have been strengthened, the course of study prolonged, and the character of the examination changed. The hospital equipment has been enormously improved and the clinical facilities correspondingly increased. But a still more striking change has been the cultivation of the scientific branches of medicine. Twenty-five years ago physiological laboratories were few and far between; now the output of a score of well-established laboratories supports one of the best journals of physiology in the world. The study of pathology has shown a corresponding growth. The most hopeful feature is a restless discontent which, let us hope, may not be allayed until the revolution is complete in all respect. Meanwhile, to students who wish to have the best that the world offers, let me suggest that the lines of intellectual progress are veering strongly to the West, and I predict that in the twentieth century the young English physicians will find their keenest inspiration in the land of the setting sun.

A CASE OF ACUTE AND CHRONIC TORSION OF THE OVARIAN PEDICLE IN THE SAME SUBJECT.

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TWISTING of the ovarian pedicle is a well-known condition, and much has been written about it on account of its high importance, both from clinical and surgical points of view. Among recent cases, I may quote Dr. Boxall's, where torsion of the same pedicle, manifested by distinct symptoms, occurred twice at an interval of eleven months.[1] According to Dr. M. Storer, a great authority on the literature of torsion, bilateral rotation is not uncommon. The case which I here relate is, however, unusual. One pedicle underwent gradual torsion, the other became suddenly twisted, affording a perfect study of the two varieties of torsion in the same subject.

Mrs. A., aged 60, was admitted into the Samaritan Free Hospital under my care on April 22nd, 1900. Dr. G. Fisher, of Shere, near Guildford, had detected an abdominal tumour, which caused much pain in the hypogastrium and left iliac fossa. These symptoms began in December, 1899. The patient had been married for over thirty years; her eighth and last pregnancy occurred over twenty years ago; the menopause was not complete till she was over 52. The abdominal walls were somewhat distended and tender. The left fornix and Douglas's pouch were occupied by an exceedingly tender bilobed swelling which rose for an inch or so above the left groin; the uterus was displaced forwards. A little to the right of the middle line lay an irregular mass reaching nearly to the umbilicus. On the night of April 24th the patient took 10 grains of pil. coloc. et hyoscyam. On the next morning, immediately after a slight action of the bowels, acute abdominal pain and vomiting set in, with distension. Flatus passed and there was no rise of temperature. The tumour on the right of the middle line was now extremely tender to touch. In a few hours the acute agony was replaced by a continual dull pain uniform with that in the left iliac fossa.

On the morning of April 26th I operated, assisted by Mr. Butler-Smythe. On making the abdominal incision a cluster of livid cysts came into view. I passed my hand behind them and turned out the whole tumour; the pedicle was firmly twisted two turns, very œdematous, and engorged with blood. There were no adhesions, nor was there any free fluid in the abdomen. I untwisted the pedicle, ligatured and divided it: the tumour, developed from the right ovary, came away. The second tumour, also made up of a cluster of smaller cysts, was then raised from behind the uterus and lifted out of the wound. Its pedicle, rather short, was twisted two turns, and atrophied in consequence. A long narrow piece of omentum was involved in the twist, running on to the pedicle from the left, posteriorly. The pedicle was ligatured and divided; the tumour originated in the left ovary. No flushing or drainage was required, the abdominal wound was closed. On recovery from chloroform the patient declared that she felt absolutely free from pain. She did not complain of any unpleasant feeling, which is the rule when even only one short pedicle has been ligatured. In this case there were two such pedicles, but so great was the relief from the pain caused by the torsion that the patient felt perfectly comfortable. Convalescence was uneventful.

The right tumour weighed 1 pound 9 ounces, and was made up of a cluster of cysts purple through ecchymoses. This appearance has been mistaken for gangrene. The cysts contained much grease. The left tumour, half a pound in weight, also consisted of a cluster of dermoid cysts. Their walls were not ecchymosed.

In this case I made the abdominal incision about 4 inches long, as directly I saw the right tumour I concluded that it would be best to take it out entire. The left, much smaller, came out easily. Not a drop of the greasy contents of either escaped before extraction. I find that small, non-adherent cysts with suspicious contents are best extracted entire; this is especially the case in pregnancy, when as little disturbance of the peritoneum as possible is important. A 4-inch incision and a peritoneal cavity found clean and left clean are better than a 3-inch incision and a peritoneal cavity fouled, however carefully it may be flushed or drained afterwards. It is quite otherwise with big multilocular cysts, which in favourable cases can be readily removed through an abdominal incision under 3 inches in length.

The literature of torsion of the pedicle is voluminous. Perhaps the most complete essays on the subject are those written by Dr. Storer of Boston U.S.A.,[2] and Professor Martin.[3] Dr. Cullingworth[4] has recently turned attention to cases where acute torsion has led to the diagnosis of an unsuspected ovarian cyst; in the present case chronic torsion of one cyst